

What is claimed is:

1. A display device including a semiconductor layer formed on a substrate and a plurality of thin film transistors having  
5 the semiconductor layers, wherein

the semiconductor layer includes a first pseudo single crystal region and a second pseudo single crystal region which is formed at a position separated from the first pseudo single crystal region, and

10 out of the plurality of thin film transistors, two or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors are arranged in the same pseudo single crystal region.

15 2. A display device including semiconductor layers formed on a substrate and having pseudo single crystal regions and a plurality of thin film transistors arranged in the inside of the pseudo single crystal regions, wherein

20 in the pseudo single crystal region, the semiconductor includes crystals which are grown in an elongate strip-like shape in the direction parallel to the substrate, and

25 out of the plurality of thin film transistors, two or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors have the direction of a length of gates of

the respective thin film transistors arranged with an inclination of within  $\pm 20$  degree with respect to the longitudinal direction of the strip-like grown crystals and are arranged such that when channel regions of the respective thin film transistors are imaginarily extended in parallel to the growth direction of the strip-like grown crystals, at least portions of the channel regions superpose each other.

3. A display device according to claim 2, wherein a rate of the superposition is 50% or more.

10 4. A display device according to claim 3, wherein a rate of the superposition is 80% or more.

5. A display device including semiconductor layers formed on a substrate and having pseudo single crystal regions and a plurality of thin film transistors arranged in the inside of the pseudo single crystal regions, wherein

in the pseudo single crystal region, the semiconductor includes crystals which are grown in an elongate strip-like shape in the direction parallel to the substrate, and

20 out of the plurality of thin film transistors, two or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors have the direction of a length of gates of the respective thin film transistors arranged with an inclination of within  $\pm 20$  degree with respect to the longitudinal direction of the strip-like grown crystals and are arranged

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such that the directions of currents which flow in the respective thin film transistors are aligned with each other.

6. A display device according to claim 1, wherein two or more thin film transistors which are required to exhibit  
5 small irregularities relative to each other as the characteristics of the transistors are formed of a differential pair of transistors which constitute a differential amplifying circuit.

7. A display device according to claim 1, wherein two  
10 or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors are formed of a pair of transistors of an active load circuit which constitutes a differential amplifying circuit.

15 8. A display device according to claim 1, wherein two or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors are formed of a pair of  
20 transistors of an active load circuit which constitutes a differential amplifying circuit and a transistor having a gate thereof to which an output voltage of the active load circuit is applied.

9. A display device according to claim 1, wherein two  
25 or more thin film transistors which are required to exhibit small irregularities relative to each other as the

characteristics of the transistors are formed of a pair of transistors which constitute a current mirror circuit.

10. A display device according to claim 1, wherein two or more thin film transistors which are required to exhibit  
5 small irregularities relative to each other as the characteristics of the transistors are connected in parallel to each other thus equivalently constituting one transistor.

11. A display device according to claim 2, wherein two or more thin film transistors which are required to exhibit  
10 small irregularities relative to each other as the characteristics of the transistors are formed of a differential pair of transistors which constitute a differential amplifying circuit.

12. A display device according to claim 2, wherein two  
15 or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors are formed of a pair of transistors of an active load circuit which constitutes a differential amplifying circuit.

20 13. A display device according to claim 2, wherein two or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors are formed of a pair of transistors of an active load circuit which constitutes a  
25 differential amplifying circuit and a transistor having a gate

thereof to which an output voltage of the active load circuit is applied.

14. A display device according to claim 2, wherein two or more thin film transistors which are required to exhibit  
5 small irregularities relative to each other as the characteristics of the transistors are formed of a pair of transistors which constitute a current mirror circuit.

15. A display device according to claim 2, wherein two or more thin film transistors which are required to exhibit  
10 small irregularities relative to each other as the characteristics of the transistors are connected in parallel to each other thus equivalently constituting one transistor.

16. A display device according to claim 5, wherein two or more thin film transistors which are required to exhibit  
15 small irregularities relative to each other as the characteristics of the transistors are formed of a differential pair of transistors which constitute a differential amplifying circuit.

17. A display device according to claim 5, wherein two  
20 or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors are formed of a pair of transistors of an active load circuit which constitutes a differential amplifying circuit.

25 18. A display device according to claim 5, wherein two

or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors are formed of a pair of transistors of an active load circuit which constitutes a differential amplifying circuit and a transistor having a gate thereof to which an output voltage of the active load circuit is applied.

19. A display device according to claim 5, wherein two or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors are formed of a pair of transistors which constitute a current mirror circuit.

20. A display device according to claim 5, wherein two or more thin film transistors which are required to exhibit small irregularities relative to each other as the characteristics of the transistors are connected in parallel to each other thus equivalently constituting one transistor.